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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,960	09/30/2003	Geoffrey Clive Grimwood	WPT.PAU.01	8129

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EXAMINER
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DRODGE, JOSEPH W

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/676,960

Applicant(s)

GRIMWOOD, GEOFFREY CLIVE

Examiner

Joseph W. Drodge

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>0903</u> . | 6) <input type="checkbox"/> Other: ____.  |

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Leung patent 6,328,897. Leung discloses perforated basket 38/36, outer casing 40, liquid supply means 20 and conduits upstream and downstream of the flow meter 206 (column 10, lines 17-26), a plethora of signal producing sensors and transducers for monitoring parameters of fluids and solids both within and in the streams expelled from the centrifuge (column 9, lines 8-35) and control devices for controlling operations based on output from the sensor and transducer signals (column 9, lines 37-62).

For claim 11, column 10, lines 19-25 infers presence of at least three conduits (or “pipes”) for handling feed streams (feed stream conduit, wash stream conduit upstream of the flow rate and density meter, and wash stream conduit downstream of the flow rate and density meters).

For claim 12, see also temperature sensors (column 9, lines 13-14 and column 2, lines 35-65).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung patent 6,063,292 in view of Joshi et al patent 6,213,928.

Regarding claim 2, Leung discloses capacitor and conductivity sensors and probes (column 3, lines 25-65 and column 9, lines 8-35) and transducers within the outer casing. The reference discloses that transducers/sensors that measure parameters related to solid/liquid content within the casing may include a transducer to measure density or streaming current of the filter basket and medium (column 4, lines 9-12) or optical devices to measure solid filter cake surface and interface locations, i.e. thickness of the sludge or cake (column 3, line 67-column 4, line 9).

Claims 2-10 differ in requiring that at least one of the transducer operable to measure parameters within the outer casing is capable of measuring conductivity. Joshi et al teach such conductivity measuring transducer (column 3, lines 23-30 and column 4, lines 32-45 and 60-67 and also column 5, lines 19-24). It would have been obvious to one of ordinary skill in the centrifuge arts to have employed at least one of the conductivity sensors of Joshi as a transducer of Leung, so as to measure even small changes in values of liquid/solid content and cake thickness in an accurate manner.

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Regarding various dependent claims; for claims 3-7, Joshi teaches at least two electrodes, which are set in electrically insulating material, for measuring conductivity and/or capacitance (column 4, lines 32-59). For claim 8-10, Leung discloses a complex electronic controller network and Joshi teaches an electronic circuit and network with plural connections (column 5, lines 25-50).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wardwell et al patent 6,143,183 pertains to a plurality of sensors and control arrangements for basket or scroll centrifuges, while Bange patent 4,229,298 teaches details of a capacitance sensor within the wall of a basket centrifuge.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached at 571-272-1151. The fax phone number for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

December 12, 2005

JOSEPH DRODGE  
PRIMARY EXAMINER

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PRIMARY EXAMINER

*Joseph Drodge*  
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